

6025-6075

ORIGINAL LOG BOOK OF THE "FISH HAWK"

UNITED STATES FISH COMMISSION

STATION NUMBERS

yr. 1898

Numbers 6028 to 6075

121
57

$$\begin{array}{r} \overline{4 \overline{) 64}} \\ 16 \\ \hline \end{array}$$

6028 RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 100 — 2028
 Date, Nov. 15-1898
 Time of day, 12 m ; of tide, 4th of ebb.
 Locality, Off Pt. Smith Light
 Exact position, Pt. Smith Light
 4 m. 1/2 m. 2 miles mag.
 Depth, 6 1/2 fathoms
 Nature of bottom, Hard
 Dredging instrument used, 7 ft beam trawl
 Direction of drift, S. S. W. ; distance, 3/8 mile
 Temperature of air, 45 therm. No., 7297
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.023 temp., 11.5
 " at depth of fathoms, "
 " at bottom, 1.023 " 14.0
 Number of salinometer, 7104
 Barometer reading, 30.08
 State of sky, Blue
 Direction of wind, N. W. ; force, 5
 Rain, No
 Direction of surface current, S. S. W. ; force, 1/2 knot
 " of bottom " ; force, "
 Name of vessel, U. S. F. C. S. Fish Hawk
 Service to which attached, Fish Commission
 Name and rank of commanding officer, Lt. Comm'r
 R. G. Sampson, Master
 Name and position of observer,
 J. H. Miller
 Thos. W. W.

NOTES RELATING TO STATION NO. 160

3 Rara Eumacia

8 Opuscul haka

1 other " " ?

4 - 18 Spum. conpua.

4 Mithras same flower

Few Sand Pollen.

E Linguius in trita +

Li Vittoria.

Diaphasia. Opuscul red algae

no stars

Bottom very rocky. Shells
drove in consequence

6029

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 101 — 2029
 Date, Nov 15th 1898
 Time of day, 1.05 pm; of tide, 5th 5th y-elt
 Locality, Off Pt. Judith neck
 Exact position, Pt. Judith Light.
 D. W. 1/4 S. 1.63 miles mag.
 Depth, 6 1/2 fathoms
 Nature of bottom, Hard rocky
 Dredging instrument used, 7 foot beam trawl
 Direction of drift, S. W. distance, 1/8 mile
 Temperature of air, 46° Fahr therm. No., 7397
 " of surface water, " "
 " at depth of fathoms, " "
 " at bottom, " "
 Density at surface, 1.023 temp., 11.5°
 " at depth of fathoms, " "
 " at bottom, 1.023 " 14.0°
 Number of salinometer, 7104
 Barometer reading, 30.16
 State of sky, Blue
 Direction of wind, N. W. ; force, 5
 Rain, No
 Direction of surface current, Slack water
 " of bottom " ; force,
 Name of vessel, U. S. F. C. S. Fish Hawk
 Service to which attached, Fish Commission
 Name and rank of commanding officer, Lt. Comdr
 R. G. Davenport, USN
 Name and position of observer, J. M. J. H. W. W. W.

NOTES RELATING TO STATION NO. 101

Red Algae

Bryozoa numerous.

Scraps of sulphur sponge

Few crabs. Spirobs

Small corbulla. murex

Cat. fringed

Diaphasia = Hydrallmania

Kelp with obelia

Delleteria

Coraline.

1 sand dollar

Urosalpinx

E. Longicauda in l. littoria

7 small eel-like fish (?)

Small Mytilus shells, few

1 small cucumber

young sea urchin.

Anchovy.

Bottom very rocky. Trawl taken in
immediately 6030

643

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 102 ~~2030~~
Date, Nov. 15, 1898
Time of day, 1:18 ; of tide, 5^h 18^m 9st
Locality, Off Pt Judith Light
Exact position, Pt Judith Light
S. W. x W. 1.12 mile mag.
Depth, 11 fathoms
Nature of bottom, Very rocky
Dredging instrument used, 7 foot beam trawl
Direction of drift, S. x W. ; distance, 1/8 mile
Temperature of air, 46 therm. No., 7397
" of surface water, "
" at depth of fathoms, "
" at bottom, "
Density at surface, 1.023 temp., 12.0 °C
" at depth of fathoms, "
" at bottom, 1.023 " 14.1 °C
Number of salinometer, 7104
Barometer reading, 30.10
State of sky, Blue
Direction of wind, N. W. ; force, 3
Rain, no
Direction of surface current, Slack water ; force,
" of bottom " ; force,
Name of vessel, U. S. F. C. S. Fish Hawk
Service to which attached, Fish Hawk
Name and rank of commanding officer, Lt. Comdr
R. G. Sampson, USN
Name and position of observer, J. M. McIlhenny
Barometer No. 7397

NOTES RELATING TO STATION NO. 102

1 fove fish.

~~Small~~ small canines, numerous

5 ~~several~~ pairs of astragali

Few pairs of sponges

Red algae

White star, several

Byzonia tenella.

Diaphasia ? = *Hydrallmania*

Several *Cribrella*.

Mastra.

Acyoniscus, few small pieces

Amachis -

Young cyclocardia.

Few sand dollars.

Broken shell of *Anomia*,

Byzonia

Opisotus,

few small annelids

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. 103 ~~2031~~
 Date, Mar. 15 - 1891
 Time of day, 1.35 of tide, 5^h 35^m of ebb
 Locality, East of Pt. Judith Light House
 Exact position, Pt. Judith Light
E x S 4 50 mile mark
 Depth, 9 fathoms
 Nature of bottom, Very rocky
 Dredging instrument used, 7 fathom trawl
 Direction of drift, S. by W. 1/2 W. distance, 1/8 mile
 Temperature of air, 46° therm. No., 7297
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.023 temp., 11.5° C
 " at depth of fathoms, "
 " at bottom, 1.023 " 12.9° C
 Number of salinometer, 7104
 Barometer reading, 30.10
 State of sky, Blue
 Direction of wind, N. W.; force, 3
 Rain, No
 Direction of surface current, Slack water, force, "
 " of bottom " ; force, "
 Name of vessel, U. S. F. C. S. Fish Hawk
 Service to which attached, U. S. Fish Commission
 Name and rank of commanding officer, Dr. Comm.
R. B. Davenport, Master
 Name and position of observer, J. M. Ingram
Pt. Roman

NOTES RELATING TO STATION NO. 103

numerous currents

Caps. formicata - live

1 young cap.

Red algae

Bryozoa

Gyrodus

Few *Cribrella* small

E. longicauda in several points

Dead shells of *C. formicata* &

Cydonia

Fragment of sulph. sponge

Anachis

Fish with *E. longicauda*

Trawl towed.
Very rocky bottom.
6032

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 104 — 2032
Date, Nov. 15-98
Time of day, 1:50 p.m. : of tide, 5/8 50 m of ebb
Locality, South of Fort Jewell
Exact position, Pt. Jewell Light
N. x E., 75 miles away
Depth, 6 1/2 fathoms
Nature of bottom, Very rocky
Dredging instrument used, 7 foot beam trawl
Direction of drift, S. W. x W. 1/4 N. 1/4 miles
Temperature of air, 48° Fahr therm. No., 7397
" of surface water, "
" at depth of fathoms, "
" at bottom, "
Density at surface, 1.022 temp., 11.2
" at depth of fathoms, "
" at bottom, 1.023 11.8
Number of salinometer, 7104
Barometer reading, 30.10
State of sky, 13 blue
Direction of wind, N. W. ; force, 3
Rain, none
Direction of surface current, Slack water : force, "
" of bottom : force, "
Name of vessel, U. S. F. C. S. Fish Hawk
Service to which attached, Fish Commission
Name and rank of commanding officer, Lt. Comdr
R. G. Barraport, USNavy
Name and position of observer, J. H. McAllister
Observer

Dr. J. E. Turner

NOTES RELATING TO STATION NO. 104

K. Algae not reported
Pogon. & pinnaria type
Pinnaria capitata few
Pinn. sp.
The small common
" " antella
Lepidodermis
Machis Astyris
1 small pin. red - brown

6033

643

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 105 — 2053
 Date. Nov 15 - 98
 Time of day, 2.03 ; of tide, Low water
 Locality, S. H. of Pt. Judith.
 Exact position, Pt. Judith Light
E. N. E. 75 miles N. by E.
 Depth, 5 fathoms
 Nature of bottom, Stony
 Dredging instrument used, dredge
 Direction of drift, N. N. W. 3/8 mile
 Temperature of air, 49 therm. No., 777
 " of surface water, " "
 " at depth of fathoms, " "
 " at bottom, " "
 Density at surface, 1.023 temp., 11.0
 " at depth of fathoms, " "
 " at bottom, 1.023 11.1
 Number of salinometer, 7104
 Barometer reading, 30.10
 State of sky, Blue cloudy
 Direction of wind, N. W. ; force, 3
 Rain, no
 Direction of surface current, E. 1/3 knots
 " of bottom " ; force "
 Name of vessel, U. S. F. C. S. Fish Hawk
 Service to which attached, Fish Comm.
 Name and rank of commanding officer, Lt Commr
W. S. Davenport, Jr.
 Name and position of observer, J. M. W.

*Asterias**Chiton rubra**Urosalpinx**Cribrella* fewAlgae & Myxozoa, numerous
Kelp of kelp; Sponges,
Hydras.*Corolla* fewfew *Corolla*, small

Purple star

small piece of sea urchin

from kelp

*Urosalpinx*few *Urosalpinx**Corolla* plentifulfew *Corolla*Small *Urosalpinx**Urosalpinx* not knownTortle not E. *Urosalpinx**Corolla* numerous, also

occupied by hermit

3 Purple star

1 or 2 *Urosalpinx*

6034

643

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No.

106

~~2034~~

Date,

Nov. 15, 98

Time of day,

4:30 P.M. ; of tide, 1/2 of flood

Locality,

Off Point of Breakwater

Exact position,

Pt. Judith Light

Depth,

6 1/4

1.50 miles map

Nature of bottom,

Gravelly sand

Dredging instrument used,

Dredge

Direction of drift,

N. by E. 1/2 E.

; distance,

1/2 mile

Temperature of air,

47°

therm. No.

759

.. of surface water,

.. at depth of fathoms,

.. at bottom,

Density at surface,

1.023

temp.,

11.92

.. at depth of fathoms,

.. at bottom,

1.023

10.3°

Number of salinometer,

7104

Barometer reading,

30.10

State of sky,

Blue light clouds

Direction of wind,

N. by E.

; force,

1

Rain,

no

Direction of surface current,

E

; force,

1/2 knot

.. of bottom

; force,

Name of vessel,

U. S. Fish Hawk

Service to which attached,

Fish Commission

Name and rank of commanding officer,

Lt. Comm.

R. G. Warrington, USN

Name and position of observer,

J. M. H. [Signature]
Resident [Signature]

Gravel, sand
 Red + brown alga
 Corallum abundant
 Leptocentrum albidum
 Scrap of sulph. sponge
 Physogona blattifera
 Echinoderm - numerous
 Sclera, rayed
 Nerites sp. curved
 C. tenebrosa
 Several pieces of sea urchin
 Few corals
 Small purple stone its sp. on
~~Small~~ Young conch shells
 Small crustaceans
 Echinoderms, 1 dotter
 Crustacean - amphipod
 Rhomastrea sp. ?
 C. Anelasma
 Rock all 3.
 C. truncata

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. *107* *2055*Date, *Nov 15*Time of day, *2:40* ; of tide, *40% of flood*Locality, *West of Pt. Jacob Lk.*Exact position, *Pt. Jacob Light*Depth, *7 fathoms*Nature of bottom, *Sandy & gravelly*Dredging instrument used, *Dredge*Direction of drift, *N.W. x W.* distance, *1/2 mile*Temperature of air, *48*therm. No., *7297*

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, *1.023*temp., *11.5*

" at depth of fathoms, "

" at bottom, *1.023*" *10.4*Number of salinometer, *7104*Barometer reading, *30.13*State of sky, *blue light clouds*Direction of wind, *N.W.* ; force, *4*Rain, *no*Direction of surface current, *E* ; force, *1/2 knot*

" of bottom, " force, "

Name of vessel, *U.S. L.C. Gun Boat*Service to which attached, *Fish Commission*Name and rank of commanding officer, *Lt. Comdr.*Name and position of observer, *W. H. H. H.*

NOTES RELATING TO STATION NO. 107

Shells, etc. same as preceding
Opisthoteuthis, along, Neritis
E. truncata, Mactra,
Lepidota, young common in water
Hormotoma, Crinoid, Bryozoa
Tritia, young common in water
Cap. formicata & planata
David Dollar
Astragalinus & terebrans (?)

6036

RECORD OF DREDGING.
TEMPERATURE AND DENSITY.

Station No. *108* ~~2036~~
Date, *Nov. 15-98*
Time of day, *3 pm* : of tide, *1st of flood*
Locality, *Traverse of Pt. Judith*
Exact position, *Pt. Judith Light*
N x N 1/4 Sec 3 miles away
Depth, *53 1/4*
Nature of bottom, *Gravel & sand*
Dredging instrument used, *Dredge*
Direction of drift, *N. 1/2 N* ; distance, *1/4 mile*
Temperature of air, *47°* therm. No., *7397*
" of surface water, "
" at depth of fathoms, "
" at bottom, "
Density at surface, *1.023* temp., *10.8*
" at depth of fathoms, "
" at bottom, *1.023* " *10.1°*
Number of salinometer, *7104*
Barometer reading, *30.11*
State of sky, *Blue light - clear*
Direction of wind, *N. W* ; force, *2*
Rain, *no*
Direction of surface current, *E* : force, *1/3 knots*
" of bottom " : force "
Name of vessel, *U. S. F. C. S. Fish Hawk*
Service to which attached, *Fish Commission*
Name and rank of commanding officer, *Lt Commr*
H. S. Davenport, Master
Name and position of observer, *J. A. Sweeney*
Pharmacist Navy

NOTES RELATING TO STATION NO. 108

Alona - *pusilla* *minima*
Pala. *caudata*
C. longicauda *flavida*
Hydrastrea
E. Bronchialis in 1 beaker
Siphon *Strophia*
L. truncata with *E. longicauda*
 Empty shell egg
Crustacea *Oryzopsis*
 Red Algae
 Small *Cancer* *procerus*
 " " *locatus*
Marstonia shell
Citrella *asturica* *costata*
 8 *Forbesi* from Wt 1/2 inch
L. truncata ; *Marstonia* of
 The same common
 Numerous small amphipods
 1 Small *Apus*

6037

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 109 — 2037
 Date, Nov. 14, 1896
 Time of day, 3.15 P.M. : of tide, 1 1/2 h. of flood
 Locality, West of Pt. Judith Lighthouse
 Exact position, Pt. Judith Light
 Ex. 4. 3.75 miles away
 Depth, 5 3/4 fathoms
 Nature of bottom, sand + mud
 Dredging instrument used, 10 foot Trawl
 Direction of drift, W x S : distance, 1/4 mile
 Temperature of air, 47° F. therm. No., 7397
 " of surface water, " "
 " at depth of fathoms, "
 " at bottom, 17022 "
 Density at surface, 1.023 temp., 10.7°
 " at depth of fathoms, "
 " at bottom, 11022 " 10.8°
 Number of salinometer, 7102
 Barometer reading, 30.11
 State of sky, Blue with clouds
 Direction of wind, W ; force, 4
 Rain, none
 Direction of surface current, E : force, 1/4
 " of bottom " : force, "
 Name of vessel, U. S. Fish Comm.
 Service to which attached, Fish Comm.
 Name and rank of commanding officer, Asst. Comm.
 R. G. W. ...
 Name and position of observer, L. ...
 ...

NOTES RELATING TO STATION NO. 109

✓ Journal - make

P. hirsuta floridana

1 16. *Alona pectinosa*

3-4 hours. Air

E. Berythroides

Ammonia, Lepidodactylus

Algas, Bryozoa, Corallina

Donax cuneatus, *Gmelin*

First Drawing

Small piece of red cloth

Leptochloa

L. *Thurston*? *Abundant in kelp*

1 *Corvus brachyrhynchos* young.

1 free worker

Gribella - Another shell.

5. *Forma otima* 14 x 10

Wm. H. Starn

7/25/1914. Continued with the

Feb. 1. March 1902

Fraxinus, p. strobil. continue

4. Analysis

Dictyone

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 110 — 2058
 Date, Nov. 15 — 98
 Time of day, 3.30 ; of tide, 1/4 h. of flood
 Locality, Mt. of Pt. Judith
 Exact position, Pt. Judith Light
E. 3/4 S. 4.50 miles
 Depth, 5 fathoms
 Nature of bottom, Rocky
 Dredging instrument used, 10 foot beam trawl
 Direction of drift, S. W. 1/4 W. distance, 3/8 mile
 Temperature of air, 47 therm. No., 7297
 " of surface water, " "
 " at depth of fathoms, " "
 " at bottom, " "
 Density at surface, 1.023 temp., 11.0° C
 " at depth of fathoms, " "
 " at bottom, 1.023 " 10.9° C
 Number of salinometer, 7112
 Barometer reading, 30.11
 State of sky, Blue, light-clouds
 Direction of wind, W. W. ; force, 2
 Rain, No
 Direction of surface current, SE ; force, 1/4 knots
 " of bottom " ; force, "
 Name of vessel, U. S. F. S. Fish Hawk
 Service to which attached, Fish Commission
 Name and rank of commanding officer, Lt. Comm.
R. S. Daney Jr.
 Name and position of observer, J. H. Hurlburt
Pharmacist

NOTES RELATING TO STATION NO. 110

Kelp with 2 *Trachina*!

Gorgonia. *Coraline*

Few small ~~clustering~~ *multibranch* eggs

Red & brown Algae

Few small *currants*

5 Purple stars - star in 50's

Rock etc. 3 (7)

Spirorbis

1 *Forbesia* star about mid

6039 RECORD OF DREDGING,TEMPERATURE AND DENSITY.

Station No. 111 - 2039
 Date, Nov. 16 - 98
 Time of day, 8:55 am; of tide, High water
 Locality, East of Narragansett Bay
 Exact position, Castle Hill Light
10 to N. N. E. - 7/10 mile mag
 Depth, 20 fathoms
 Nature of bottom, Hard
 Dredging instrument used, 7 foot beam trawl
 Direction of drift, 0.3/4 N.; distance, 3/8 of mile
 Temperature of air, 51° Fahr. therm. No., 7247
 " of surface water, " "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.0224 temp., 14.2° C
 " at depth of fathoms, "
 " at bottom, 1.023 " 14.0° C
 Number of salinometer, 7104
 Barometer reading, 30.76
 State of sky, Blue - hazy
 Direction of wind, N. W.; force, Light
 Rain, no
 Direction of surface current, 0; force, 0
 " of bottom " ; force, "
 Name of vessel, U. S. F. C. Fish Hawk
 Service to which attached, U. S. Commission
 Name and rank of commanding officer, Dr. Comm.
R. B. Davenport
 Name and position of observer, J. M. Sullivan

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No. *112* — *2040*
 Date, *Nov. 16th 1898*
 Time of day, *9.35 am.* of tide, *3/4 h of ebb.*
 Locality, *Hamamawass Bay*
 Exact position, *Cattle Hill Light*
S. E. 3/4 E. 1 1/2 mile mag.
 Depth, *26 fathoms*
 Nature of bottom, *Hard smooth, bottom*
 Dredging instrument used, *7 foot beam trawl*
 Direction of drift, *P. W.* ; distance, *3/8 of mile*
 Temperature of air, *48° Fahren* therm. No., *7397*

.. of surface water, ..

.. at depth of .. fathoms, ..

.. at bottom, ..

Density at surface, *1.024* temp., *11.2°*

.. at depth of .. fathoms, ..

.. at bottom, *1.023 +* .. *11.0°*

Number of salinometer, *7104*

Barometer reading, *30.27*

State of sky, *Blue haze*

Direction of wind, *N. W.* ; force, *Light*

Rain, *no*

Direction of surface current, *0* ; force, *0*

.. of bottom .. ; force ..

Name of vessel, *U.S.F.C. Fish Hawk*

Service to which attached, *Fish Commission*

Name and rank of commanding officer, *Ensign*

R. E. Campbell

Name and position of observer,

W. H. H. H.

Hamamawass Bay

NOTES RELATING TO STATION NO. 118

Grass numerous
Squirrel hair several
Rosa Tompacia 1 large cal
~~Water found~~

1. *Madroffman*, *Carpenter*
Pandanus numerous
Hyppocrite 1 *Loose*
1 *Curran* Red algae

Diaphana? *Spirulina*
Commensal *Pyrosoma*
Penaeus *Hydrois*, *Coraline*
Old skate egg with hydrois
1 *Mistle* *Star*, *epidont*
Cancer *torulata*, *Cynthia* *Carnea*

1 *Hydrois*, small *undibranch*
Myriobala *Mod* *shrub*, *Cibicella*
Sponge, *Heteromys*, *formosa*
1 *Balanus*, *See* *work*

1 *Purple* *star* small, 1/2 to 1 in
Isotia *Amphipods*
Caprell *Young* *crabby*
Page *fish*, 1 small *pentan* *ten*
1 *notched* *rock* *etc.*
Anemone *Sp.* *retrograde*
1 *Scyrops* *in* *tritia*

TEMPERATURE AND DENSITY.

Station No. 113 — 2041
Date, Nov 16-98
Time of day, 10.10 AM : of tide, 1 1/2 h. of eb.
Locality, Massachusetts Bay,
Exact position, Rock Island Light
N x E 1/4 E. 1.7 of mile mag.
Depth, 43 fathoms
Nature of bottom, smooth, sand
Dredging instrument used, 7 foot beam trawl
Direction of drift, D. O. E. 1/2 E. : distance, 3/8 of mile
Temperature of air, 58° Fahr therm. No., 7397
" of surface water, "
" at depth of fathoms, "
" at bottom, "
Density at surface, 1.022 temp., 11.
" at depth of fathoms, "
" at bottom, 1.023 " 12.2
Number of salinometer, 7104
Barometer reading, 30.28
State of sky, Blue haze
Direction of wind, N. W. : force, Light
Rain, No
Direction of surface current, S x W. force, 1 knot
" of bottom " : force, "
Name of vessel, U. S. F. C. S. Fish Hawk
Service to which attached, Fish Commission
Name and rank of commanding officer, Lt. Comdr
R. S. Davenport
Name and position of observer,

NOTES RELATING TO STATION NO. 113

3 *Ria homacea*

8 sponge like

1 young salmon like? Red algae

1 small brownish large

1 " " " " " "

Panipera ^{plagiolith} *Tonibulus* with eggs

Orang & *hypophyllis* plantings

Young *canes* *brachis*

Small *Antaria*. *Diaphanos* *platis*

Aporobis - *Chondrus* in fruit

1 large *serena* *tenella* in bottle

1 small *buccinum* *Prigogon*

Cynthia *carnea*. *Anomea* *aculeata*

Small *membranifera*, *Notodum*

Cyrella - *Crepidula* *plana*

Orbia. Remnants of *Panfula*

Shells of *cyclacadia*

Modiola *convoluta*? 1 large fan

1 young sea urchin! *Primita* star

1 small green anemone

Dead shell of *primita* fan

Polysyllus. *Modiola*

2 simple stars 1/2 to 1 cm

Lepidodermis *mass* *undulata*

anachis. *Five* *branchiata*

1 *Impressa* on tube

Adonia. *Littia* *alia*

1 *Confer* *ul* small

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift,

Temperature of air,

" of surface water,

" at depth of fathoms,

" at bottom,

Density at surface,

" at depth of fathoms,

" at bottom,

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind,

Rain,

Direction of surface current,

" of bottom,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

6042

114 - 2052

Nov. 16 - 98

11. am

off tide, 4 h. of ebb

Hampden Bay

Double Island Light

1.25 mile W. by N.

9 3/4.

Muddy & shelly

7 ft. beam trawl

D. N. 3/8 S. ; distance, 26 of mile

54° F. ; therm. No. 7397

" of surface water,

" at depth of fathoms,

" at bottom,

1.021 - 4

temp., 10.8°

" at depth of fathoms,

1.023

" 11.°

Number of salinometer, 7102

Barometer reading, 30.28

State of sky, Blue. St. clouds.

Direction of wind, N. W. ; force, very light.

Rain, no

Direction of surface current, D. N. ; force, 1/2 knot

" of bottom,

Name of vessel, U. S. F. C. S. Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, Lt. Comdr.

Name and position of observer, R. A. Thompson

NOTES RELATING TO STATION NO. 114

3 Red Corners - 1 shell

79 Queen Victoria.

1 - 74 2 per v floor 17

3. *multum* *for* —

Charles H. Young

Laccaria filosa.

1 large cyclostyle box

Love, Kate!

Actaria cylindrica ~~other~~
Pseudactaria Actaria verrucata.

Pseudococcus Actipite venosatus.

1. *Myrica sp.* (bark)

1891 / 1892

Bayesian Theorem - Evidence

S. littoralis. *Chlorophanes*

Golden, cycloceras, Callitriche

Ch. in *Leptocarpus* in India and

L. brevicornis, L. Pictor.

100 *Trichocarpus*

1 large pipe fish - 1 trophosoma

Coccyzus Primulivorus

Lasi yulda kulu, cyclocarya.

l. brevitata, *nassa virens*?

Fr. Amelb. 1 Germ. Cancer. Urination

Columbus Ave. Crater

Yours truly,
A. J. [Signature]

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 115 2063
 Date, Nov. 16 - '90
 Time of day, 11.55 am; of tide, 7/8 h. of ebb
 Locality, Narragansett Bay
 Exact position, Light 7 1/2 m. from Conanicut - S. of d.
N. N. W. 1/4 E. 2 1/2 7.50 miles mag.
 Depth, 15 fathoms
 Nature of bottom, muddy, shelly
 Dredging instrument used, 7 foot beam trawl
 Direction of drift, 4 1/2 N. D.; distance, 3 miles
 Temperature of air, 58° Fahr. therm. No. 7397
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.021 temp., 10.1°
 " at depth of fathoms, "
 " at bottom, 1.022 + 10.5°
 Number of salinometer, 7104
 Barometer reading, 30.26
 State of sky, Blue light clouds
 Direction of wind, Calm; force, very light
 Rain, no
 Direction of surface current, N. W.; force, 1/2 knot
 " of bottom " ; force, "
 Name of vessel, U. S. Fish Hawk
 Service to which attached, Fish Commission
 Name and rank of commanding officer, Ch. Comdr.
R. G. Thompson
 Name and position of observer, Thompson
Thompson

NOTES RELATING TO STATION NO. 115

2 Rana temporaria

2 Agrionidae

1 Conus ed.

1 Holothuridae

1 Squilla

3 Cancer borealis

3 - - - - -

for bush. Forbs etc.

Yoldia of the shells (partially seen)

Mya. Chlorophora Yellow Aster

Venus. Tridacna, Callista

E. Longicauda in Tridacna - f. littorea

L. Tridacna, Lucina filosa

Modiola concolorata (?) Cap. pinnata

For shells 1 young sea urchin

Mya. Coarctata, pinnata

Peryptera, Lockwood, P.

Coarctata, pinnata - shells

Urtica alba, new with E.

Longicauda, For contract. sp.

Nassa vivax (?)

Trawl fouled the bottom. Had
to take it up 60 fms

643

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 116 — 2044
Date, Nov, 16 - 1898
Time of day, 11.55 Am. of tide, 3 h. up at
Locality, Narragansett Bay.
Exact position, Sand Point Light
N. N. E. $3\frac{1}{8}$ E. 1.37 miles mag.
Depth, 18 fathoms
Nature of bottom, Clayey
Dredging instrument used, 7 ft beam trawl
Direction of drift, N. N. $3\frac{1}{4}$ W. distance, .3 of mile
Temperature of air, 58° Fahr therm. No., 7397
" of surface water, ..
" at depth of fathoms, ..
" at bottom, ..
Density at surface, 1.020 temp., 10.1
" at depth of fathoms, ..
" at bottom, 1.022 " 11.1
Number of salinometer, 7104
Barometer reading, 30.25
State of sky, Blue light clouds
Direction of wind, Calm; force.
Rain, no
Direction of surface current, A. R. : force, 1/2 knot
" of bottom " : force.
Name of vessel, U. S. F. C. S. Fish Hawk
Service to which attached, Fish Comm
Name and rank of commanding officer, Lt. Comdr
H. G. Thompson Master
Name and position of observer, J. D. Sullivan
Pharmacist

1 *Cancer borealis*

2 " *borealis*

Many of *pseudosquilla*

1 *Labridae*, *Pelica*

1 *Scyrtops* large

Many shell *Callinectes*, *Urosalpinx*

Few *Amphipoda*, *Triton*

Oyster shells, *Caprellidae* shells

Bostrichidae etc. Small *Peridinium* etc.

Dev. neotridium

Young *Squilla* taken

Several large *Crustacea* of *Chelonia*

Lepidosteus, *Crangon*

Back ul? *Myoxocephalus*

Anomoea *aculeata*

2 tubes of *P. oculifera* (?)

Cyathia, *Caracanthus* (?)

A little *Hydrobia*

Few *Anomoea* shells, *Spurilla*

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. *117 - 2045*
 Date, *Nov. 16 - 1898.*
 Time of day, *1.14 PM*; of tide, *1/2 h of ebb*
 Locality, *From Jamaica Bay*
 Exact position, *Sand Point Light.*
N x W. 3/4 W. .68 mile away
 Depth, *13 1/2 fathoms.*
 Nature of bottom, *Soft, Green mud.*
 Dredging instrument used, *7 foot beam trawl*
 Direction of drift, *1/2 W.*; distance, *.37 of mile*
 Temperature of air, *50° Fahr* therm. No. *7397*
 " of surface water, " "
 " at depth of *13 1/2* fathoms, "
 " at bottom, "
 Density at surface, *1.020* temp., *10.2° C*
 " at depth of *13 1/2* fathoms, "
 " at bottom, *1.022 +* " *11.° =*
 Number of salinometer, *710 -*
 Barometer reading, *30.21*
 State of sky, *Blue, light clouds*
 Direction of wind, *S. S. E*; force, *✓*
 Rain, *No.*
 Direction of surface current, *S. S. W.*; force, *1/2 knot*
 " of bottom " ; force,
 Name of vessel, *U.S.C.S. Fish Hawk*
 Service to which attached, *Fish Commission*
 Name and rank of commanding officer, *Dr. C. C. Davenport, U.S.N.*
 Name and position of observer, *L. H. Weighman*
Thomas C. Davenport

NOTES RELATING TO STATION NO. 117

- 9 *Naria formica* for *Agonostoma* *harm.*
 1 Blue comb.
 1 4 sp. *flomoder* small
 3 narrow *lance* &
cluster of Chalusa, *Ca. sed.*
Mordaka *Corrugata*
Isangon, *Puccinipera*
L. triseriata - *Y. lina*
Agassizone, *metridium*
L. longicauda *Tuba*
 13 *Triglophus* *Chidrophora*,
Nereida *For. pumilus*.
Callista *lancea*.
Pholis of *Chidrophora*, *males*
Cap. formica *For. anelid*
 1 *For. Mares*.
E. longicauda in *tubes* & *littora*
Rock *sed.*
For. Yoldia, *Telma* - *callista*,
Lepidomochus

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

6046

Station No. 118 - 2000

Date, Nov. 10 - 98

Time of day, 1.00 pm : of tide, 4 ³/₄ h of ebb

Locality, Manassas Bay

Exact position, Pauls Point Light
4 N x W ¹/₂ W. .5 of mile mag.

Depth, 15 fathoms

Nature of bottom, Muddy - shelly

Dredging instrument used, 7 ft beam trawl

Direction of drift, 4 x W. ³/₄ N distance, .25 of mile

Temperature of air, 50° Fahr therm. No. 7777

" of surface water, ..

" at depth of .. fathoms, ..

" at bottom, ..

Density at surface, 1.020 temp., 9.8° C

" at depth of .. fathoms, ..

" at bottom, 1.021 + .. 11.3° C

Number of salinometer, 7104

Barometer reading, 30.20

State of sky, Blue - light clouds

Direction of wind, S. S. E : force, 4

Rain, No

Direction of surface current, S. S. W ; force, 1/2 knot

" of bottom .. : force, ..

Name of vessel, U. S. F. C. S. Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, Asst Comdr
H. G. Dancer, post. Master

Name and position of observer, J. H. Hylan
Pharmacist, USN

NOTES RELATING TO STATION NO. 118

E. Pollicarous in cyclopyrus shell

C. plana

✓ Cancer coronatus

numerous Artate ~~callosa~~ undatum

Small white holothurians several

E. Longicauda undata + L. truncata

Trophosia ^{identified} - Crangon

✓ Cyclopyrus lva, Trita

^{shell} Tulpus, Callista - Couria

L. ~~truncata~~: Clidophora

Shells of cyclocardus. Numerous shells

Panopeus Mytilus shells

Shells of mya + anodonta. Yoldia

lva Callista, few scattered

Small cluster of chabrus

Cardium pinnulatum, C. formosa

Small section in common peeler shells

L. dittonia shells

75 Forbush plate

1 large fish

1 young squinid larva

More material not fully looked over

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

6027

Station No. *119 - 2057*

Date. *Nov. 16 - 1898*

Time of day. *1.55* : of tide. *5h 7th*

Locality, *Springport Sound*

Exact position, *Land Power Light.*

S. W. 1.75 miles away

Depth. *11 fathoms*

Nature of bottom, *Muddy Shelly*

Dredging instrument used, *7 foot beam trawl*

Direction of drift, *S. by E. 3/4 E.* distance, *1/8 of mile*

Temperature of air, *50° Fahr.* therm. No., *7397*

" of surface water. "

" at depth of fathoms. "

" at bottom, "

Density at surface, *1.020* temp., *9.8° C.*

" at depth of fathoms. "

" at bottom, *1.023* " *10.7° C.*

Number of salinometer, *7104*

Barometer reading, *30.20*

State of sky, *1/2 blue, light clouds*

Direction of wind, *P. S. E.* ; force, *2*

Rain, *2 in*

Direction of surface current, *S. S. W.* ; force, *1/2 knot*

" of bottom " ; force, "

Name of vessel, *U. S. F. C. S. Fish Hawk*

Service to which attached, *Fish Commission*

Name and rank of commanding officer, *Dr. R. B. Davenport, U. S. N.*

Name and position of observer, *J. M. Williams, Lieutenant*

NOTES RELATING TO STATION NO. 119

E. longicauda in *Tridacna* shell
Small *Race* *Emmeline*

Two white flowers

1 *Indigo* *Leuca*

1 *Common* *Leuca*

About 100 *Tridacna* *Hans* 1860. small

Shells of oyster, *Mya*, *Common* *Pecten*

Venus, *Emmeline*, *Tardus*

Mytilus, *Mytilus* *Mulinus*

Mytilus *Leuca*

Tridacna, *Leuca*

Emmeline, *Mytilus*

Shell of *Tridacna*, *Leuca*

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. *120 - 2058*
 Date, *Nov. 16-1898*
 Time of day, *4.30 p* : of tide, *5/6 h. of ebb*
 Locality, *Maragansett Bay*
 Exact position, *Latid Point Light*
Y. S. H. *1.6 mile away*
 Depth, *3 3/4 fathoms.*
 Nature of bottom, *Soft mud.*
 Dredging instrument used, *7 ft. beam trawl*
 Direction of drift, *Y. N. 3/4 E* ; distance, *25 1/2 mile*
 Temperature of air, *49° F* therm. No., *7397*
 " of surface water, " "
 " at depth of fathoms, " "
 " at bottom, " "
 Density at surface, *1.020* temp., *9.8°*
 " at depth of fathoms, " "
 " at bottom, *1.021* " *10.2°*
 Number of salinometer, *7105*
 Barometer reading, *30.20*
 State of sky, *Blue cloudy*
 Direction of wind, *N. N. E* ; force, *2*
 Rain, *no*
 Direction of surface current, *0 x tr* ; force, *1/3 knot*
 " of bottom " : force, "
 Name of vessel, *U. S. F. S. Fish Hawk*
 Service to which attached, *Fish Commission*
 Name and rank of commanding officer, *Dr. Comdr*
R. G. Savinoff, Master
 Name and position of observer,
J. H. McIlhenny
A. B. Johnson

NOTES RELATING TO STATION NO. 120.

25 - *Monarda* *lancea*

20 *Winter* *flora*

1 *Cornus* *bracteata*

Several *Ranunculaceae* sev. small

Papaver

Monarda *lancea*. *Asperula*.

Monarda *lancea*. Common *pesten*

Ranunculus. *Cyclanthera*.

Liriodendron *lancea*. *C. frumosa*.

Petrorhiza *lancea*. *Asperula*

Callista *lancea*

3 *Robinia* *lancea*

Ranunculus (?) *Asperula*

Trifolium. *Chlorophytum*

Allyanassa. *Capriolata* *lancea*

Urosalpinx *lancea*

L. truncatus & *analepis*.

L. littoralis with *L. longicauda*

6049

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. *121 - 2049*
Date, *Nov. 16. 1898*
Time of day, *2.50* ; of tide, *Low water,*
Locality, *Narragansett Bay.*
Exact position, *Sand Point Light*
S. x 27. 7/8 W. 2.15 miles away
Depth, *4 fathoms*
Nature of bottom, *Muddy.*
Dredging instrument used, *7 foot beam trawl*
Direction of drift, *S. 7/8 W.* ; distance, *3 1/2 miles*
Temperature of air, *49° Fahr* therm. No., *7297*
" of surface water, ..
" at depth of .. fathoms, ..
" at bottom, ..
Density at surface, *1.020* temp., *10.2° C*
" at depth of .. fathoms, ..
" at bottom, *1.021* - *11° C*
Number of salinometer, *7104*
Barometer reading, *30.20*
State of sky, *Blue, light clouds*
Direction of wind, *N. N. E* ; force, *2*
Rain, *no*
Direction of surface current, *N. N. W.* ; force, *1/3 knot*
" of bottom " ; force, ..
Name of vessel, *U. S. F. C. S. Fish Hawk*
Service to which attached, *Fish Commission*
Name and rank of commanding officer, *St. Gu...*
R. H. Deane
Name and position of observer, *J. H. ...*
Pharmacist

NOTES RELATING TO STATION NO. 121

3 Pail, various & small
8 Troncos piece flower
of Nivalis

about 50 small tubes down 1/2 to 1 in
Shells of *Lucina filosa*.

Subspherical sponge.

Escherichia *Resipula*.

Membranifera.

Myrachne.

Chydorus shells. *Dipler* shells.

Acorn shells. *Cyrtus* *portula*
& *formosa* shells. *Littorina*.

Astarte *undatum* *Scapharca*

& *Imbricaria* *Common* *pelecus*

Mod *convexa* *Littorina*

Bythium *Bythium* *caudata* *lat*

yellow *astarte*. *Littorina*

Callinectes *C. formosa*

Bythium *Crangon*

Lygia *fril* *Tru* *amphipod*

A few large shells of *Porophora*

Common

Trawl taken up in 20 ft
temp below, 58°
643 Density 1021 6050

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift,

; distance,

Temperature of air,

therm. No.,

" of surface water,

" at depth of fathoms,

" at bottom,

Density at surface,

" at depth of fathoms,

" at bottom,

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind,

; force,

Rain,

Direction of surface current,

; force,

" of bottom "

; force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO. 127

Found baby box, and little
shells.

10 few specimens little shells,

1 Fish Scorpene,

1 piece of coral

Dredge hauled in 30 minutes
101 fathom temp 69.
Density 1.024 - 7164 sal.
643 6051

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 1003 - 2057
Date, June 13 1899
Time of day, 1.20 : of tide,
Locality, ~~Off Cape Cod~~ *Off Cape Cod*
Exact position, ~~2 miles S. of Cape Cod~~ *2 miles S. of Cape Cod*
Depth, 45 fathoms, *2 1/2 miles*
Nature of bottom, *fluffy mud*
Dredging instrument used, *Trawl*
Direction of drift, *E 3/4 N.* : distance, *3/4 mile*
Temperature of air, *72 fahr* therm. No., *7399*
" of surface water, "
" at depth of fathoms, "
" at bottom, " *77*
Density at surface, *1023* temp., *24.4°*
" at depth of fathoms, "
" at bottom, *1027* " *77°*
Number of salinometer, *7164*
Barometer reading, *30.02*
State of sky, *Blue & cloudy*
Direction of wind, *E. N. E.* ; force, *2*
Rain, *no*
Direction of surface current, ; force,
" of bottom " ; force,
Name of vessel, *U. S. F. C. S. Fish Hawk*
Service to which attached, *Fish Com.*
Name and rank of commanding officer, *Dr. Conrad*
R. G. Haverford
Name and position of observer, *J. H. Hargrave*
H. H. Hargrave

NOTES RELATING TO STATION NO. 123

Wingless swan

RECORD OF DREDGING.

TEMPERATURE AND DENSITY

Station No. / 20 - 2037

Date, Jan 13 1899

Time of day. 3.15 : of tide.

Locality. Outside Ent. San Francisco

Exact position. *Old Fort O, N. 2. W. 5. 1/2 Sec.*

Depth, 340 fathoms

Nature of bottom. *Sandy mud*

Dredging instrument used, *Sigsbee*

Direction of drift, *D x E, 7/8 E* distance, *1 1/2 miles*

Temperature of air. *79° Fahr* (therm. No., *7292*)

" of surface water. " 58.5

“ at depth of fathoms. ”

at home.

Density at surface. *1023* temp., *26.5*

at depth of fathoms.

at bottom. 1,078 131

Number of salinometer. 7164

Barometer reading. 27.76State of sky, *Blue, lighter about 2*

Direction of wind. *S.W.* ; force. *2*

Rain.	No
-------	----

Direction of surface current, : force.

“ of bottom “ : force.

Name of vessel. *H. G. S. S. S. S. S. S.*

Service to which attached, *Adm. Com.*

Name and rank of commanding officer, *Dr. Cooper*

К. Г. Давыдов, Член

Name and position of observer: *X. M. C. C. C.*

NOTES RELATING TO STATION NO.

6053

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 125 — 2053
 Date, Jan. 15th 1899
 Time of day, 10.30 ; of tide, ebb
 Locality, Outer Harbor
 Exact position, N. W. angle of inner harbor
1/4 mile
 Depth, 4 fathoms to 7 1/2 fathoms
 Nature of bottom, Sand. Fine
 Dredging instrument used, Dredge
 Direction of drift, N x W. ; distance, 1/4 mile
 Temperature of air, 77° therm. No. 7397
~~" of surface water, "~~
~~" at depth of fathoms, "~~
~~" at bottom, "~~
 Density at surface, 1.023 temp., 26.5
~~" at depth of fathoms.~~
~~" at bottom, 1.022 " 26.5~~
 Number of salinometer, 7164
 Barometer reading, 30.08
 State of sky, Blue, light clouds.
 Direction of wind, East ; force, 2
 Rain, No
 Direction of surface current, N ; force, 1/2 knot
 " of bottom " ; force,
 Name of vessel, U.S.F.C.S. Fish Hawk
 Service to which attached, Fish Com.
 Name and rank of commanding officer, Lt. Comdr
R. B. Sawney, USN
 Name and position of observer, J. H. Sullivan
Pharmacist, USN

NOTES RELATING TO STATION NO.

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

6054

Station No. 176 — 2054

Date, Jan. 16th 1899

Time of day, 11⁰⁰ Am.; of tide, Ebb

Locality, San Juan Harbor

Exact position, N. W. angle of Puerto
Castro 3/8 of 7 miles

Depth, 4 1/2 fathoms to 5 1/2

Nature of bottom, Sand mud.

Dredging instrument used, Long Dredge

Direction of drift, N.; distance, 1/8 mile

Temperature of air, 77° Fahr. therm. No., 7297

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.023 temp., 25° C

" at depth of fathoms, "

" at bottom, 1.025 " 25.2° C

Number of salinometer, 7164

Barometer reading, 30.07

State of sky, Overcast

Direction of wind, East. (Quality) 5; force, 5

Rain, No

Direction of surface current, N.; force, 1/2 knot

" of bottom " ; force,

Name of vessel, U. S. S. Fish Hawk

Service to which attached, Fish Comm.

Name and rank of commanding officer, Lt. Comdr
R. L. Davenport

Name and position of observer, Spencer
Harmon

NOTES RELATING TO STATION NO.

643

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 127 2055

Date, Jan. 18th 1896

Time of day, 11.15 am; of tide,

Locality, San Diego, P. R.

Exact position, At O. H. Point of San Carlos
N. E. & N. W. 1 1/2 miles. Pt. de Gonzales
N. E. & N. W. 3 1/4 miles

Depth, 137 fathoms

Nature of bottom, Sandy shell and coral

Dredging instrument used, Dredge - trawl

Direction of drift, N. E. & E.; distance, 1/4 mile

Temperature of air, 87° Fahr. therm. No., 7397

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.023 temp., 26.2° C

" at depth of fathoms, "

" at bottom, 1.0248 " 24° C

Number of salinometer, 7164

Barometer reading, 29.98

State of sky, B. & light clouds

Direction of wind, E; force, 3

Rain, No.

Direction of surface current, 0; force, 0

" of bottom " ; force,

Name of vessel, U. S. Fish Hawk

Service to which attached, Fish Com.

Name and rank of commanding officer, Mr. Comdr

Name and position of observer, J. M. G. ...

NOTES RELATING TO STATION NO.

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 128 — 256
 Date, Jan 20
 Time of day, 1.20 ; of tide,
 Locality, off Aqueduct, C.R.
 Exact position, 3 miles from Carlos Church in up Bay 0.5 x 0.5 E
3 miles from Piquette Light House N. 1/2 E.
2 1/4 miles
 Depth, 248 fath
 Nature of bottom, ocean mud & shells
 Dredging instrument used, dredge & trawl
 Direction of drift, N 5 1/2 E ; distance, 1/2 miles
 Temperature of air, 87° F therm. No., 7397
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, 1.023.2 temp., 36.5° C
 " at depth of fathoms, "
 " at bottom, 1.025 " 24.5° C
 Number of salinometer, 7164
 Barometer reading, 29.93
 State of sky, Blue light clouds
 Direction of wind, E ; force, 3
 Rain, no
 Direction of surface current, 0 ; force, 0
 " of bottom " ; force,
 Name of vessel, U. S. F. C. S. Fish Hawk
 Service to which attached, Fish Com
 Name and rank of commanding officer, Ch. Comdr
R. G. Sawyers, USN
 Name and position of observer, J. M. McLaughlin
Pharmacist

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day, 2.15 p.m.; of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift,

Temperature of air,

" of surface water,

" at depth of fathoms,

" at bottom,

Density at surface,

" at depth of fathoms,

" at bottom,

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind,

Rain,

Direction of surface current,

" of bottom " ; force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

8 } Chart no. 572

2057

179

Jan. 19. 1899

2.15 p.m.; of tide,

Harbor of Mayaguez, P.R.

Curtis Home. E. to N. 3/8 mile

4 1/8 fathoms

Muddy (Terra firma)

Dredge Trough

N. N. W. 1/4 N. distance. 1/4 mile

83.5 fahr therm. No. 1013

" of surface water, " 1

" at depth of fathoms, "

" at bottom, "

1.023 temp. 25°C

" at depth of fathoms, " 25.6°C

" at bottom, 1.028 water " 25.6°C

7164

29.92

Blue, light cloud.

P. E. ; force, 3

no

C ; force, 0

" of bottom " ; force,

U. S. F. C. S. Fish Hawk

Sub. Comm.

Lt. Comm.

R. G. Davenport, Surgeon

J. H. McMillan

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift,

Temperature of air,

" of surface water,

" at depth of fathoms,

" at bottom,

Density at surface,

temp.,

" at depth of fathoms,

" at bottom,

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind,

Rain,

Direction of surface current,

; force,

" of bottom

; force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

Taken up in 7 fathoms
6.5-8 10 minutes

Station No. 130 (Chart no. 372) 2058
Date, Jan. 19th 1899
Time of day, 3 pm ; of tide,
Locality, Mayaguez Harbor.
Exact position, Custom House Exd. 1/2 miles
Pt. del Algarrobo 1/2 m. 1/2 miles
Depth, 7 1/4 fath.
Nature of bottom, Muddy
Dredging instrument used, 9 ft beam trawl.
Direction of drift, S. 1/4 W. ; distance, 1/2 mile
Temperature of air, 79° Fahr therm. No. 1013
" of surface water, " 79.7
" at depth of fathoms, " 79.7
" at bottom, " 79.7
Density at surface, 1.023 temp., 26°C
" at depth of fathoms, " 26°C
" at bottom, 1.025 " 26°C
Number of salinometer, 7164
Barometer reading, 29.89
State of sky, Blue - light clouds
Direction of wind, S.E. ; force, 3
Rain, No -
Direction of surface current, 0 ; force, 0
" of bottom " ; force,
Name of vessel, U.S.F.C. S. Fish Hawk
Service to which attached, Fish Commission
Name and rank of commanding officer, Lt. Comdr
R. G. Sawcater, USN
Name and position of observer, J. H. Gilligan
Commanding Officer

NOTES RELATING TO STATION NO.

6057

RECORD OF DREDGING.

TEMPERATURE AND DENSITY

Station No.

131 - Chart no. - 372

Date

Jan. 19, 1899

Time of day

2 pm. : of tide.

Locality

Mayaguez Harbor

Exact position

Custom House E. 1/4 S. 1/4 mile

Depth

7 to 10 fathoms

Nature of bottom

Mud, s.

Dredging instrument used

A. F. beam

Direction of drift

S. 1/4 E. 1/4 mile

Temperature of air

82° Fahr.

therm. No.

1.013

" of surface water,

" at depth of fathoms,

" at bottom,

Density at surface

1.023 ✓

temp.,

26° C

" at depth of fathoms,

" at bottom,

1.027

27° C

Number of salinometer,

7164

Barometer reading

29.89

State of sky

Blue, light clouds

Direction of wind

O. E. ; force,

3

Rain,

No

Direction of surface current,

S. 1/4 E.

; force,

" of bottom

; force,

Name of vessel

U. S. F. C. S. Fish Hawk

Service to which attached

Fish Commission

Name and rank of commanding officer

St. Comdr

R. G. Sawaport

Name and position of observer

J. M. Wilson

Observer, Fish Commission

NOTES RELATING TO STATION NO.

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

6060

Station No. *132-Charter 372* *2060*
Date, *Jan. 19 1899*
Time of day, *4.20* : of tide,
Locality, *Mayaguez Harbor*
Exact position, *Custom House Ex. I. 1/2 E. 2 1/2 miles*
St. de Alvarado N. 1/2 E. 1 1/2 miles
Depth, *19 fathoms*
Nature of bottom, *Muddy*
Dredging instrument used, *Dredge*
Direction of drift, *North* : distance, *3/8 mile*
Temperature of air, *74° F* therm. No., *1.013*
" of surface water, "
" at depth of fathoms, "
" at bottom, *1.023* "
Density at surface, *1.023* temp., *26.2°C*
" at depth of fathoms, "
" at bottom, *1.0245* " *27°C*
Number of salinometer, *2490 716*
Barometer reading, *29.90*
State of sky, *Blue - Light - Clouds*
Direction of wind, *S. E.* ; force, *1*
Rain, *No*
Direction of surface current, *0* ; force, *0*
" of bottom " : force,
Name of vessel, *U.S. Fish Hawk*
Service to which attached, *Fish Comm.*
Name and rank of commanding officer, *Lt. Comdr*
R. G. Dawson
Name and position of observer, *W. H. H. H.*

NOTES RELATING TO STATION NO. _____

6061

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. *133 - Chart no. 372* *2061*
 Date, *Jan. 30 1899.*
 Time of day, *9.50* : of tide.
 Locality, *North Massachusetts*
 Exact position, *off Cape Cod light 1 1/2 miles*
 Depth, *18 fathoms*
 Nature of bottom, *Sandy mud*
 Dredging instrument used, *Beam trawl*
 Direction of drift, *S. & E.* : distance, *3/8 miles*
 Temperature of air, *78° fahr* therm. No., *1.013*
 " of surface water, "
 " at depth of fathoms, "
 " at bottom, "
 Density at surface, *1.023* temp., *26.8° C*
 " at depth of fathoms, "
 " at bottom, *1.024* " *26° C*
 Number of salinometer, *7164*
 Barometer reading, *30.02*
 State of sky, *Blue, light clouds*
 Direction of wind, *S. E.* ; force, *1/4*
 Rain, *no*
 Direction of surface current, — ; force, —
 " of bottom " : force, "
 Name of vessel, *U. S. Fish Hawk*
 Service to which attached, *Fish Commission*
 Name and rank of commanding officer, *St. Commr.*
R. H. Scammon, Master
 Name and position of observer,
J. M. McFarlane
Assistant

NOTES RELATING TO STATION NO.

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 134 Chart no 372

Date, Jan 20 - 1899

Time of day, 10:15 am; of tide,

Locality, Mayaguez Harbor.

Exact position,

Black buoy and cable n 1/2 m. S. of
bridge cable p. Red buoy - 825 ft. S. of cable

Depth, 25 to 30 fathoms

Nature of bottom, Mud, sand & shells.

Dredging instrument used, dredge

Direction of drift, S. x E. 1/2 E; distance, 1/2 mile

Temperature of air, 78° fahr therm. No. 1003

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, 1.023 temp., 76° C

" at depth of fathoms,

" at bottom, 1.024 " 75° C

Number of salinometer, 7154

Barometer reading, 30.00

State of sky, Blue, light clouds.

Direction of wind, E. x S. E; force, 1

Rain, No

Direction of surface current, —; force,

" of bottom " : force,

Name of vessel, U. S. F. C. Fish Hawk

Service to which attached, Fish Commission

Name and rank of commanding officer, Lt. Comdr.

R. G. Warrington, W. R. R.

Name and position of observer,

J. H. Miller
Thermometer, 1003

NOTES RELATING TO STATION NO.

Sample in 75 fathoms
Bottom Density 1.025
Group 68. Lake 6063

RECORD OF DREDGING.

TEMPERATURE AND DENSITY

Station No. 135 - Chart no 1001
Date, Jan. 20 - 1899
Time of day, 10.45 ; of tide,
Locality, Mayaguez Harbor
Exact position, 14 1/2 miles
Depth, 76 fathoms
Nature of bottom, rocky coral sand
Dredging instrument used, 9 ft beam trawl
Direction of drift, N. by E ; distance, 1 mile
Temperature of air, 78.9 Fahr therm. No. 1013
" of surface water, "
" at depth of fathoms, "
" at bottom, "
Density at surface, 1.0232 temp., 25.8°C
" at depth of fathoms, "
" at bottom, 1.025 " 26.2°C
Number of salinometer, 7164
Barometer reading, 29.99
State of sky, Cloudy
Direction of wind, S. E. ; force, 1
Rain, No
Direction of surface current, ; force,
" of bottom " ; force,
Name of vessel, U.S.F.C. Fish Hawk
Service to which attached, Fish Commission
Name and rank of commanding officer, Dr. Connor
Name and position of observer, R. G. Davenport, Master
J. H. Morgan
R. G. Davenport, Master

NOTES RELATING TO STATION NO.

Taken up in *xx fath*
Bottom *Gravelly 1.024*
Temp *78° fahr 25.6° C*
643

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No.

136 - Chart no 1001

Date.

Jan. 20 - 1899

Time of day,

11.35 am; of tide,

Locality,

Mayaguez Harbor

Exact position,

Mayaguez Harbor, P.R. 1/2 mile S. of Mayaguez

Depth,

33 1/2 fathoms

Nature of bottom,

fine sand

Dredging instrument used,

dredge

Direction of drift,

South

; distance, *1/2 mile*.

Temperature of air,

77° fahr

therm. No., *1,013*

"

of surface water,

"

"

at depth of fathoms,

"

"

at bottom,

"

Density at surface,

1.023

temp., *25.7° C*

"

at depth of fathoms,

"

at bottom. *1.0243*

Number of salinometer.

7164

Barometer reading,

29.98

State of sky,

overcast

Direction of wind,

P.E.

; force,

3

Rain.

no sp. light

Direction of surface current,

-

; force,

"

of bottom

"

; force,

Name of vessel.

U.S.F.C. S. Fish Hawk

Service to which attached,

U.S. Fish Commission

Name and rank of commanding officer.

St. Anwar.

Name and position of observer.

R. S. Davenport. U.S.N.
J. M. Williams.
Therapist. U.S.N.

NOTES RELATING TO STATION NO.

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No.

137 - Chart no. 1001

Date,

Jan. 20 - 1899

Time of day,

1.30 pm; of tide.

Locality,

Harbor Mayaguez

Exact position,

Anson's Cove. N. E. 1/4 E. 1/2 mile

Depth,

4 to 6 fathoms

Nature of bottom,

Coral bottom

Dredging instrument used,

Dredge

Direction of drift,

South; distance, 1/2 mile

Temperature of air,

80° Fahr therm. No. 1013

" of surface water.

" at depth of fathoms.

" at bottom.

Density at surface,

1.0232 temp. 26° C

" at depth of fathoms.

" at bottom.

1.0236 26° C

Number of salinometer,

7164

Barometer reading,

29.91

State of sky, -

Cloudy

Direction of wind,

S. S. E.; force, 4

Rain,

No

Direction of surface current,

; force,

" of bottom

; force,

Name of vessel,

U. S. S. Fish Hawk

Service to which attached,

U. S. Navy

Name and rank of commanding officer,

R. B. Davenport, USN

Name and position of observer,

J. M. Allen

NOTES RELATING TO STATION NO. _____

RECORD OF DREDGING.

TEMPERATURE AND DENSITY. 2066

Station No.

138 - Chart No 1001

Date,

Jan. 24 1895

Time of day,

7.35

; of tide,

Locality,

Mayaguez Harbor

Exact position,

Point of view of light house. N. 1/2 E. 9 miles

Depth,

177 fathoms

Nature of bottom,

Mud & sand

Dredging instrument used,

Open beam trawl

Direction of drift,

N. 1/2 E.

; distance,

1 mile

Temperature of air,

78°

therm. No.,

"

of surface water.

"

"

at depth of

fathoms.

"

"

at bottom,

"

Density at surface,

1.023

temp.,

76° C

" at depth of

fathoms.

"

" at bottom,

1.0246 (61° F)

78° C

Number of salinometer,

7165

Barometer reading,

29.90

State of sky,

Blue, light clouds

Direction of wind,

S. S. E.

; force,

1/2

Rain,

No -

Direction of surface current,

; force,

"

at bottom

; force,

Name of vessel,

U.S.S. Fish Hawk

Service to which attached,

Fish Commission

Name and rank of commanding officer,

Lt. Comdr.

Name and position of observer,

H. B. Cooper

H. B. Cooper

NOTES RELATING TO STATION NO.

Taken up to 97 fathoms.
Bottom, Green mud. 1024
643 Temp. 68° Fahr. 26°C

RECORD OF DREDGING.

6067 TEMPERATURE AND DENSITY 2067

Station No. 24 - Chart no - 1001

Date, Jan. 20 - 1899.

Time of day, 3:40 pm; of tide,

Locality, Nagasaki Harbor

Exact position, Off Japan S. E. 14. N. 10 1/2 miles

Depth, 120 fathoms

Nature of bottom, Coral

Dredging instrument used, dredge

Direction of drift, S.W. 1/2 E.; distance, 3/4 mile

Temperature of air, 54° Fahr. therm. No., 1013

" of surface water,

" at depth of fathoms,

" at bottom,

Density at surface, 1.023 ✓

temp., 26.3°C

" at depth of fathoms,

" at bottom, 1.025

temp., 65° Fahr

Number of salinometer, 7164

Barometer reading, 29.90

State of sky, Blue light clouds

Direction of wind, S. E.; force, 1/2

Rain, No

Direction of surface current, — ; force, —

" of bottom " ; force,

Name of vessel, U.S.F.C. Fish Hawk

Service to which attached, Fish Comm.

Name and rank of commanding officer, Lt. Comm.

Name and position of observer, J. H. Brown

Ph. W. Brown

NOTES RELATING TO STATION NO.

Trawl came up - 220 fath 1000 fms 10248 6000 fms 58 fath + 2000 2000 RECORD OF DREDGING,

10000 TEMPERATURE AND DENSITY

Water Haul

Station No. 140 - dark no.

Date, Jan. 21 - 1899

Time of day, 17.55 ; of tide,

Locality, Mayaguez Harbor
 East end of Canton Is. E. 6 1/2 S. E. 7 1/2 miles

Exact position,

Pt Jiguero Lt. N. 1/2 E. 8 1/2 miles

Depth, 237 fathoms

Nature of bottom,

Dredging instrument used, 9 fath beam trawl

Direction of drift, S. B. E. ; distance, 1/2 mile

Temperature of air, 57° Fahr therm. No., 4012

" of surface water,

" at depth of fathoms,

" at bottom,

Density at surface, 1.023

temp., 28° C

" at depth of fathoms,

" at bottom, 1.0242

" 23.2° C

" 57° Fahr

Number of salinometer, 7164

Barometer reading, 29.96

State of sky, 1/2 blue

Direction of wind, N. W. ; force, 1

Rain, No

Direction of surface current, ; force,

" of bottom " ; force,

Name of vessel, U. S. F. C. S. Fish Hawk

Service to which attached, Fish Com

Name and rank of commanding officer, Lt. Comdr

W. E. Lawrence

Name and position of observer, J. W. Johnson

Ch. W. Johnson

NOTES RELATING TO STATION NO. _____

RECORD OF DREDGING,

TEMPERATURE AND DENSITY.

Station No. 141, Chart no. 2069

Date, Jan. 21 - 1899

Time of day, 7:10 pm: of tide,

Locality, Narragansett Harbor

Exact position, Pt. Ignace, Dr. Ho. N. 1/2 E. 8 1/2 miles

Cushnet Ho. E. S. E. 1/2 E. 7 1/2 miles

Depth, 13 fathoms

Nature of bottom, Mud & sand.

Dredging instrument used, Dredge

Direction of drift, R. & E 1/2 E. : distance, 1/2 mile

Temperature of air, 80° fahr.

Therm. No. 1013

" of surface water.

" at depth of fathoms.

" at bottom.

Density at surface, 1.023

temp., 26.6° C

" at depth of fathoms.

" at bottom, 1.0242

22.5° C
56° fahr

Number of salinometer, 7164

Barometer reading, 29.92

State of sky, Blue

Direction of wind, N. W. : force, 1

Rain, No

Direction of surface current, — : force, —

" of bottom " : force,

Name of vessel, U.S.F.C.S. Fish Hawk

Service to which attached, Fish Com.

Name and rank of commanding officer, Dr. B. B. Davis

Name and position of observer, J. H. Mullan

NOTES RELATING TO STATION NO. _____

Trawl came up in 220 fathoms
Bar. Density - 1.0242
Temp 60° Fahr 20° C

646

6070 RECORD OF DREDGING,
TEMPERATURE AND DENSITY.

Station No. 1-2 ✓ Char no. 2070

Date, Jan. 21 - 1899

Time of day, 3.15 pm; of tide.

Locality, Mayaguez Harbor

Exact position, Cushman Pt. S 78° 0. 9 miles
P. J. L. L. S. 2 1/8 E. 10 miles

Depth, 225 fathom

Nature of bottom, Rocky

Dredging instrument used, 9 foot beam trawl

Direction of drift, S. W. 80°; distance, 5/8 mile

Temperature of air, 78° Fahr, therm. No., 1.013

" of surface water,

" at depth of fathoms.

" at bottom,

Density at surface, 1.0233 temp., 26° C

" at depth of fathoms.

" at bottom, 1.0242 " 24.6° C
59° Fahr

Number of salinometer, 7165

Barometer reading, 29.91

State of sky, Blue

Direction of wind, S. W.; force, 1

Rain, no

Direction of surface current, -; force,

" of bottom " : force,

Name of vessel, U.S.F.C. S. Fish Hawk

Service to which attached, Fish Com.

Name and rank of commanding officer, Lt. Comdr.

R. S. Thompson, Master

Name and position of observer, J. D. M. M. M.

J. H. M. M.

NOTES RELATING TO STATION NO.

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift,

Temperature of air,

therm. No.,

" of surface water,

" at depth of fathoms,

" at bottom,

Density at surface,

temp.,

at depth of fathoms,

" at bottom,

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind,

; force,

Rain,

Direction of surface current,

; force,

" of bottom

"

; force,

Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO. _____

6072 RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 122 -

Date, January 20 1899

Time of day, 1.20 : of tide,

Locality, Off Pt. Molines, D. St. of Oregon

Exact position, Cape Royal St. Co. D. St. 5 1/2 miles

Depth, 7 1/2 fathoms

Nature of bottom, Coral sand - shelly

Dredging instrument used, Trawl

Direction of drift, N. 3/4 E. : distance, 1 1/2 miles

Temperature of air, 76 Fahr therm. No., 1013

" of surface water,

" at depth of fathoms,

" at bottom,

Density at surface, 1.0228 temp., 26°C

" at depth of fathoms,

" at bottom, 1.023 " 26°C

Number of salinometer, 7164

Barometer reading, 29.96

State of sky, Cloudy blue

Direction of wind, S.E. : force, 4

Rain, No.

Direction of surface current, — : force, —

" of bottom " — : force, —

Name of vessel, U. S. Fish Comm.

Service to which attached, Fish Commission

Name and rank of commanding officer, Lt. Comdr.

R. P. Sawaport, M.A.

Name and position of observer, J. T. Milligan

NOTES RELATING TO STATION NO.

Net dropped from ridge from
height of 100 feet. - no record
6073

613

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. 145 2073
Date, Jan. 25 1899
Time of day, 2.03 ; of tide,
Locality, Off Molokai
Exact position, W. side of Molokai, N. E. 1 1/2 mi.
Pt. Guinequile, N. E. 3/4 E. 1 1/4 miles
Depth, 8 fathoms
Nature of bottom, 1.1
Dredging instrument used, dredge
Direction of drift, N. E. ; distance, 3/4 mile
Temperature of air, 80° fahr., therm. No., 1,013
" of surface water, " "
" at depth of fathoms, " "
" at bottom, " "
Density at surface, 1.023 temp., 26° C
" at depth of fathoms, " "
" at bottom, 1.023 " 27° C
Number of salinometer, 7164
Barometer reading, 29.95
State of sky, Blue, light clouds
Direction of wind, N. E. ; force, 4
Rain, no
Direction of surface current, — ; force, —
" of bottom " " ; force, " "
Name of vessel, U. S. F. C. S. Fish Hawk
Service to which attached, Fish Commission
Name and rank of commanding officer, W. A. Wood
2d Lt.
Name and position of observer, W. A. Wood

NOTES RELATING TO STATION NO.

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

Station No. *146* — ~~2070~~
 Date, *Jan 25th 1899*
 Time of day, *2:35* ; of tide,
 Locality, *Off Puerto Real*
 Exact position, *When tugs to Cape of Guiniquilla S 7/4 E. 7 miles*
Pt. Boca-prita E 1/4 N. 1 mile mag
 Depth, *8 1/4 fathoms*
 Nature of bottom, *Sandy & Coral*
 Dredging instrument used, *Trawl*
 Direction of drift, *E. N. E.* ; distance, *1/2 mile*
 Temperature of air, *82° fahr* therm. No. *1013*
 " of surface water, " "
 " at depth of fathoms, " "
 " at bottom, " "
 Density at surface, *1.023* temp., *26° C*
 " at depth of fathoms, " "
 " at bottom, *1.023* " *26° C*
 Number of salinometer, *7164*
 Barometer reading, *29.96*
 State of sky, *Blue, light clouds.*
 Direction of wind, *S. E* ; force, *1 1/2*
 Rain, *no*
 Direction of surface current, — ; force, —
 " of bottom " ; force, —
 Name of vessel, *U. S. F. C. S. Fish Hawk*
 Service to which attached, *Fish Commission*
 Name and rank of commanding officer, *Dr. Comdr*
R. G. Thompson, USNavy
 Name and position of observer, *William*
Thomson

NOTES RELATING TO STATION NO.

RECORD OF DREDGING.

TEMPERATURE AND DENSITY.

6075

Station No. 147 2075
 Date, Jan. 25 1899,
 Time of day, 3.20 : of tide,
 Locality, Off Cape Point
 Exact position, Pt. Quanguilla I. O. E. $3\frac{1}{2}$ miles
 Fandree Cay E. $13\frac{1}{2}$ miles
 Depth, $8\frac{1}{2}$ fathoms
 Nature of bottom, sandy, coral
 Dredging instrument used, dredge
 Direction of drift, N. by E. distance, $3\frac{1}{2}$ miles
 Temperature of air, 80° Fahr., therm. No., 1013
 " of surface water, " "
 " at depth of fathoms, " "
 " at bottom, " "
 Density at surface, 1.0228 temp., 26°C
 " at depth of fathoms, " "
 " at bottom, 1.023 25.5°C
 Number of salinometer, 2164
 Barometer reading, 29.93
 State of sky, Blue, light clouds; light rain
 Direction of wind, S.E. : force, 12
 Rain, none
 Direction of surface current, — : force, —
 " of bottom " : force, "
 Name of vessel, U. S. F. C. S. Fish Hawk.
 Service to which attached, Fish Commission
 Name and rank of commanding officer, Lt. Comdr
 R. H. Lawrence, USN
 Name and position of observer, J. D. Sullivan
 Harbormaster

NOTES RELATING TO STATION NO.

RECORD OF DREDGING, TEMPERATURE AND DENSITY.

Station No.

Date,

Time of day, ; of tide,

Locality,

Exact position,

Depth,

Nature of bottom,

Dredging instrument used,

Direction of drift, ; distance,

Temperature of air, therm. No.,

" of surface water, "

" at depth of fathoms, "

" at bottom, "

Density at surface, temp.,

" at depth of fathoms, "

" at bottom, "

Number of salinometer,

Barometer reading,

State of sky,

Direction of wind, ; force,

Rain,

Direction of surface current, ; force,

" of bottom " ; force,

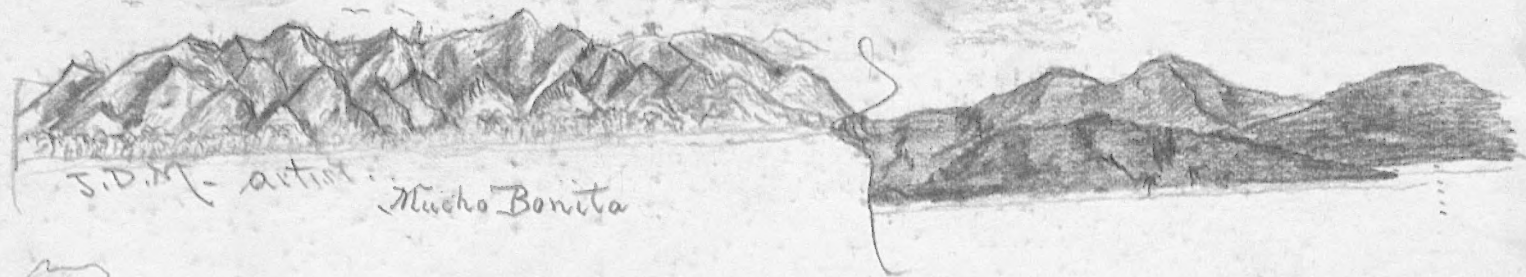
Name of vessel,

Service to which attached,

Name and rank of commanding officer,

Name and position of observer,

NOTES RELATING TO STATION NO. _____



J.D.M. - artist
Mucho Bonita

